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DOOR ACTUATED SIGNAL FOR RURAL MAIL BOX

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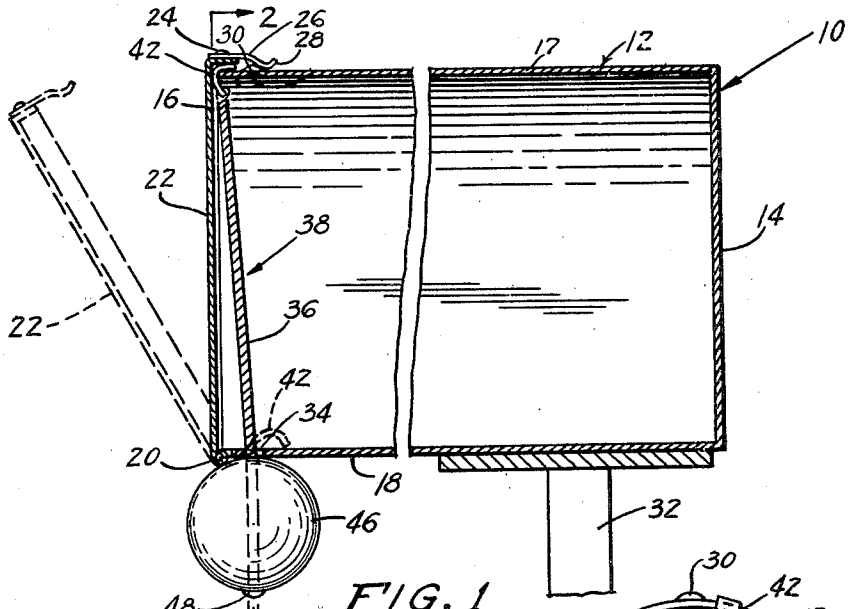


FIG. 1

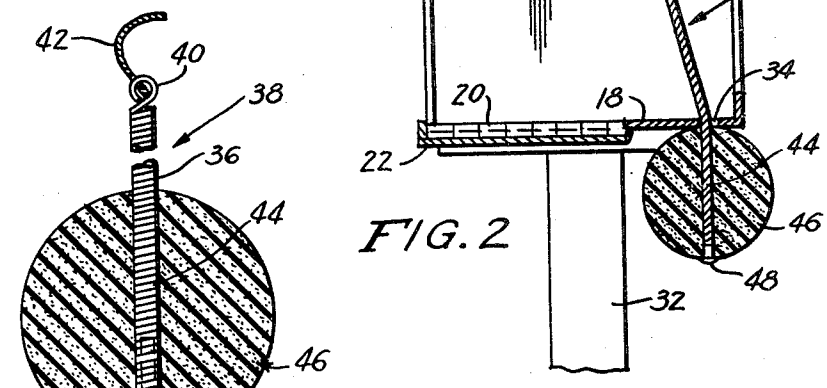


FIG. 2

FIG. 3

INVENTORS
RAY E. BAILES
ELIZABETH F. BAILES
BY
McMorrow, Berman & Davidson
ATTORNEYS

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DOOR ACTUATED SIGNAL FOR RURAL MAIL BOX

Ray E. Bailes and Elizabeth F. Bailes, Warren, Ohio

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3 Claims. (Cl. 232—35)

This invention relates generally to an improved rural mail box involving door-actuated signal means for indicating deposit in the box of mail by a mailman.

Rural mail boxes generally include a pivotal flag adapted to be raised for the purpose of apprising a mail carrier of the presence of mail therein to be picked up, but such mail boxes usually lack effective signal means for apprising the owner that mail has been delivered thereto. In rural areas, wherein the mail box is located a substantial distance from the dwelling, the lack of signal means thereon to indicate at a distance that mail has been delivered to a box necessitates innumerable trips thereto and oftentimes creates a hardship, especially during inclement weather.

The primary object of the present invention is to provide, as a separate accessory for installation on rural mail boxes, or as factory equipment, an efficient and practical signal device of the character indicated, which is simple in construction and composed of relatively few parts which are easily and quickly assembled.

Another object of the invention is to provide a door-actuated signal device for rural mail boxes which can be made in attractive, rugged, and serviceable forms at relatively low cost is easily installed, used and maintained, and is highly satisfactory and acceptable for the purpose intended.

These, together with other objects and advantages, which will become apparent reside in the details of construction and operation more fully hereinafter described, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout the several views, and in which:

Figure 1 is a vertical longitudinal section taken through a rural mail box equipped in accordance with the present invention, showing in dotted lines an open position of the door and a signalling position of the signal device;

Figure 2 is a transverse vertical section taken substantially on line 2—2 of Figure 1; and

Figure 3 is an enlarged fragmentary transverse section taken through the signal ball and the hook, and showing the elastic cord in side elevation.

Referring in detail to the drawings, a substantially conventional rural mail box 10 is shown which comprises a horizontally elongated casing 12 having a closed rear end 14, and an open front end 16 through which mail is inserted and removed. The container 12 further comprises parallel side walls 13 rising from a flat bottom wall 18, and a transversely rounded top wall 17.

The bottom wall 18 has extending along its front edge a suitable hinge assembly 20 pivoting thereon the lower edge of a door 22 arranged to be swung from the full line closed position to the open dotted line position, as seen in Figure 1. The door 22 has suitably secured, as by means of a rivet 24, to its upper end a rearwardly extending leaf spring 26 having a terminal latch portion 28 engageable over an upstanding rib 30 on the upper surface of the top wall 17 of the container 12 to hold the door in closed position. The container 12 is mounted on a suitable support, such as a post 32, shown fragmentarily in Figures 1 and 2.

A signal device 38 in accordance with the present invention comprises a resilient and elastic cord 36, preferably in the form of a helical metal spring having connected to its upper end, as indicated at 40, a flat metal hook 42 wider than the cord. Circumposed on the lower part of the cord 36 is an enlarged signal 46, preferably in the form of a distinctively colored ball, which is maintained on the cord by a retainer 48, preferably in the form of a screw 47 having an enlarged head 45 engaging the bottom of the signal. As shown in Figure 3, the screw 47 is threaded into the lower end of the spring 36.

The mail box bottom wall 18 is provided with a hole 34 near its front edge and near one side wall 13 of the box. The cord 36 is passed upwardly through the hole 34 and the hook 42 then connected to its upper end and then engaged around the front edge of the top wall 17 of the box, preferably at the side of the door catch 28 adjacent to the hole 34.

The cord 36 is of such length that when the hook 42 is engaged over the front edge of the container top wall 17, the cord is stretched and is under tension and the signal 46 is forcibly engaged with the underside of the container bottom wall 18, and the hook 42 has a tendency to slide outwardly and downwardly along and free itself from the front edge of the top wall 17. This tendency is resisted by engagement of the door 22 with the hook 42 when the door 22 is closed. It is to be noted that the hook 42 is too large to pass through the hole 34, so that when the hook 42 becomes disengaged from the front edge of the container top wall, upon opening the door, and if necessary, manually displacing the hook 42, the hook will engage the container bottom wall 18 and the signal 46 will then be securely held in a downwardly displaced signalling position, as shown in dotted lines in Figure 1.

The herein disclosed signal device 38 can be easily applied to existing rural mail boxes, simply by drilling a hole in the bottom wall thereof, and applying the device as described above, without further mutilation of the mail box.

The foregoing is considered illustrative only of the principles of the invention. Since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, as fall within the scope of the appended claims.

What is claimed is:

1. In a rural mail box, a container having an open front end, a bottom wall and a top wall, said top wall having a front edge, said bottom wall having a front edge, a door having a lower edge horizontally hinged on the front edge of the bottom wall, said door having an upper edge, a rearwardly projecting spring catch on the upper edge of the door, an upstanding rib on said top wall with which said catch is retainably engaged only in the closed relation of said door to the open front end of the container, said container bottom wall being provided with a hole near its front edge, a cord extending upwardly through said hole, said cord having an upper end and a lower end, a hook connected to said upper end and arranged to be engaged over the front edge of said top wall, and an enlarged signal secured on the lower end of the cord, the length of the cord being proportioned to position said signal against the underside of the container bottom wall while said hook is engaged over the front edge of the container top wall and to enable said signal to drop away from the container bottom wall whenever the hook is freed from the front

edge of the container top wall, said hook being wider than said hole so that the hook engages the container bottom wall and securely suspends the signal in signalling position, said hook having a portion arranged to be engaged by said door while the hook is engaged over the front edge of the container top wall whereby the hook is maintained in such position.

2. In a rural mail box, a container having an open front end, a bottom wall and a top wall, said top wall having a front edge, said bottom wall having a front edge, a door having a lower edge horizontally hinged on the front edge of the bottom wall, said door having an upper edge, a rearwardly projecting spring catch on the upper edge of the door, an upstanding rib on said top wall with which said catch is retainably engaged only in the closed relation of said door to the open front end of the container, said container bottom wall being provided with a hole near its front edge, a cord extending upwardly through said hole, said cord having an upper end and a lower end, a hook connected to said upper end and arranged to be engaged over the front edge of said top wall, and an enlarged signal secured on the lower end of the cord, the length of the cord being proportioned to position said signal against the underside of the container bottom wall while said hook is engaged over the front edge of the container top wall and to enable said signal to drop away from the container bottom wall whenever the hook is freed from the front edge of the container top wall, said hook being wider than said hole so that the hook engages the container bottom wall and securely suspends the signal in signalling position, said hook having a portion arranged to be engaged by said door while the hook is engaged over the front edge of the container top wall whereby the hook is maintained in such position, said front edge of the container top wall having a side portion which is transversely curved in a downwardly and laterally outward direction and along which said hook can slide when the door is swung from closed to open position and the hook becomes disengaged.

3. In a rural mail box, a container having an open front end, a bottom wall and a top wall, said top wall having a front edge, said bottom wall having a front edge,

a door having a lower edge horizontally hinged on the front edge of the bottom wall, said door having an upper edge, a rearwardly projecting spring catch on the upper edge of the door, an upstanding rib on said top wall with which said catch is retainably engaged only in the closed relation of said door to the open front end of the container, said container bottom wall being provided with a hole near its front edge, a cord extending upwardly through said hole, said cord having an upper end and a lower end, a hook connected to said upper end and arranged to be engaged over the front edge of the top wall, and an enlarged signal secured on the lower end of the cord, the length of the cord being proportioned to position said signal against the underside of the container bottom wall while said hook is engaged over the front edge of the container top wall and to enable said signal to drop away from the container bottom wall whenever the hook is freed from the front edge of the container top wall, said hook being wider than said hole so that the hook engages the container bottom wall and securely suspends the signal in signalling position, said hook having a portion arranged to be engaged by said door while the hook is engaged over the front edge of the container top wall whereby the hook is maintained in such position, said front edge of the container top wall having a side portion which is transversely curved in a downwardly and laterally outward direction and along which said hook can slide when the door is swung from closed to open position and the hook becomes disengaged, said cord being elastic and being under tension while the hook is engaged over said portion of the front edge of the top wall and said signal is engaged with the underside of the container bottom wall, said cord then serving to slide the hook downwardly on said front edge portion to free the hook therefrom when the door is swung from closed to open position.

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